Marine Spatial Planning—The Role of Multi Objective Planning --How to move forward?

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Marine Spatial Planning – Why and at what scale?

- What are the Tools & lessons from within the Sanctuary boundaries?
- How do Marine Sanctuaries and marine protected areas connect with Regional Marine Spatial Planning?
- Are Marine Sanctuaries supporting regional biodiversity objectives?

NW Atlantic Assessment

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The Nature Conservancy and Marine Conservation

- Over 50 years in terrestrial and freshwater conservation.
- The TNC mission of biodiversity eventually lead to marine systems. Many marine assessments now completed
- Different strategies and approaches to Marine systems: Marine Spatial Planning
- To sustain biodiversity we need to understand the processes, physical structures and habitats that drive species patterns.


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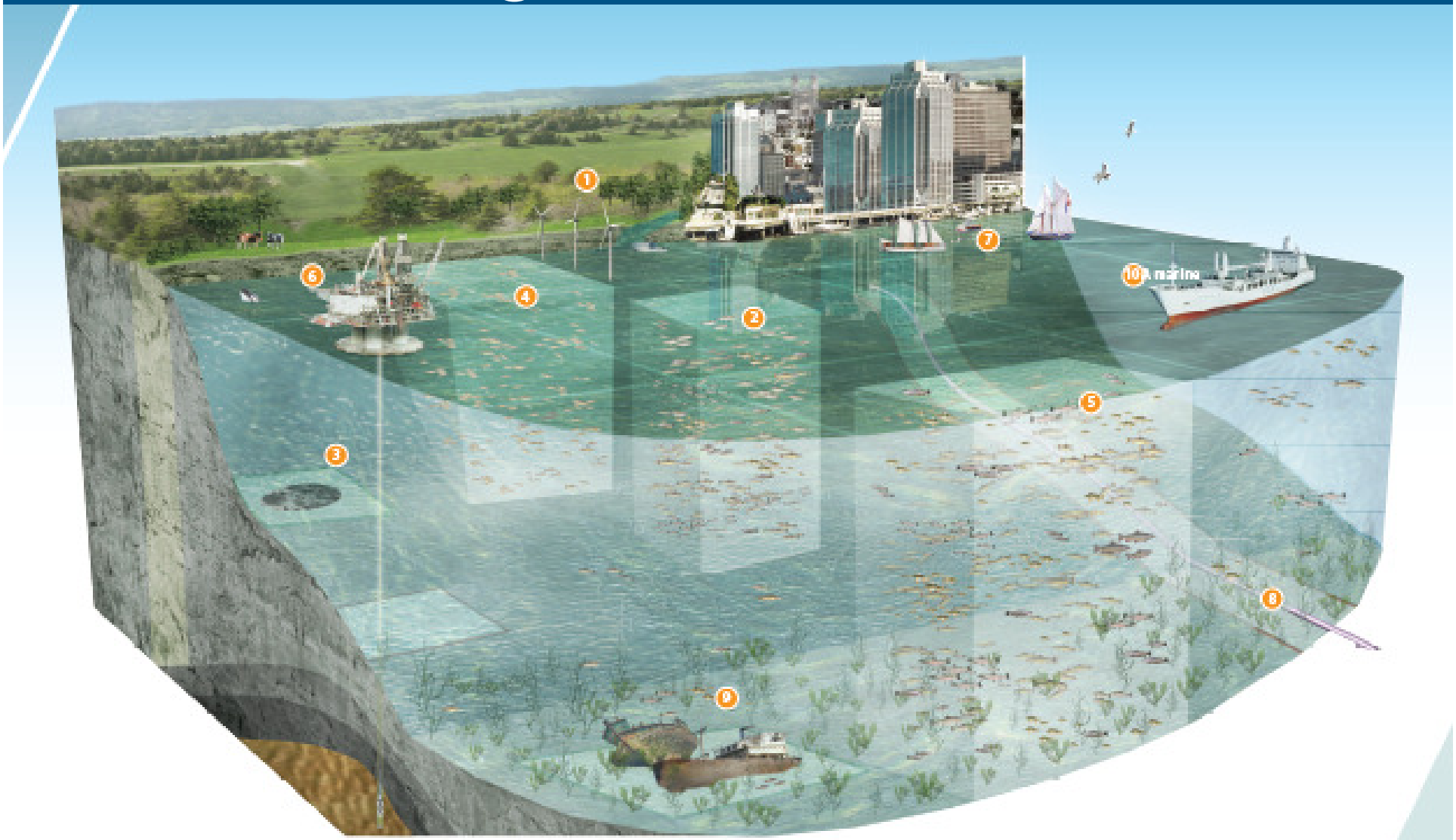
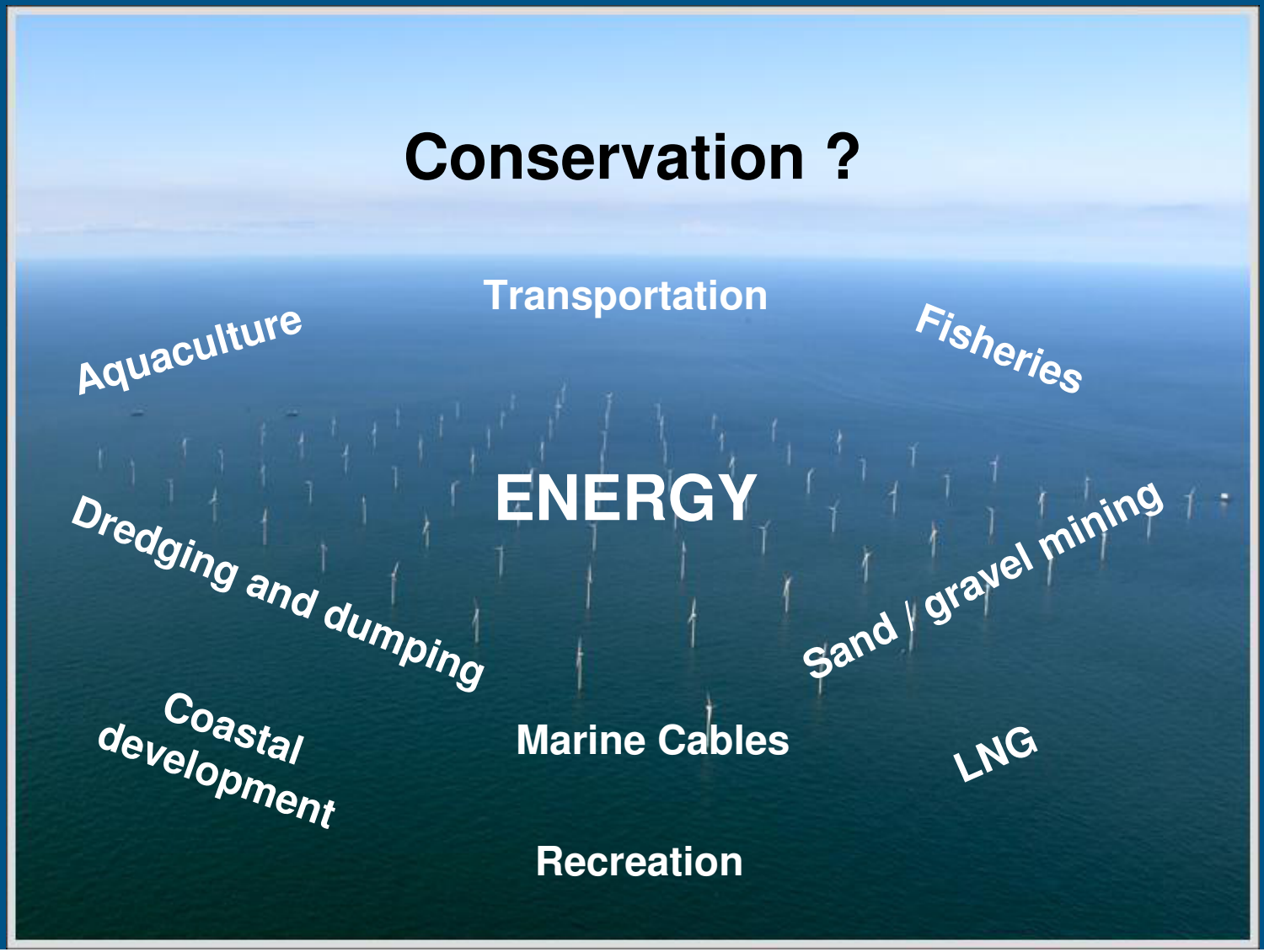
Increasing Demand and Uses



Energy is the driver

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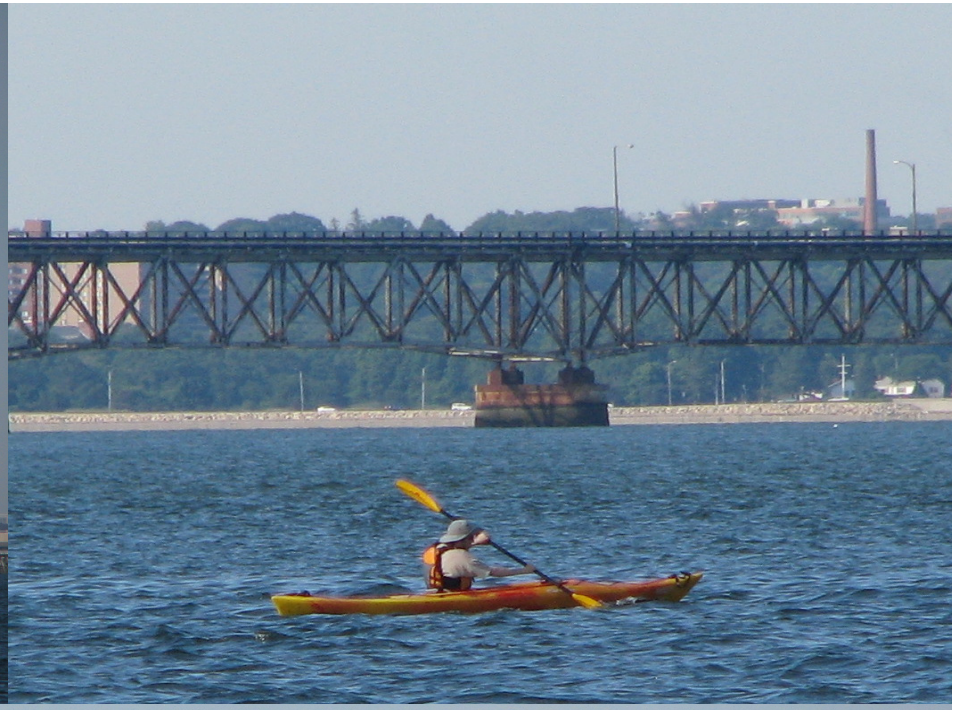


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Defining MSP

- MSP is a public process to develop a blue print for ocean management by:
  - analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually set through a political process.

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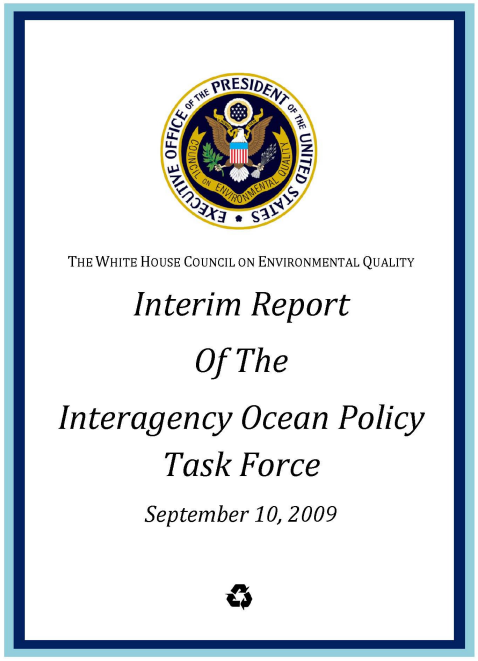
Enabling Conditions & Opportunities

- Interagency Ocean Policy Task Force – MSP- Dec 12
- State Legislative sessions in 2010
- Federal Legislation: Sanctuary Act, Energy bill, CZMA
- Foundation focus (Moore & Packard)
- Regional Ocean Partnerships



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Imagine if there were no land-use planning

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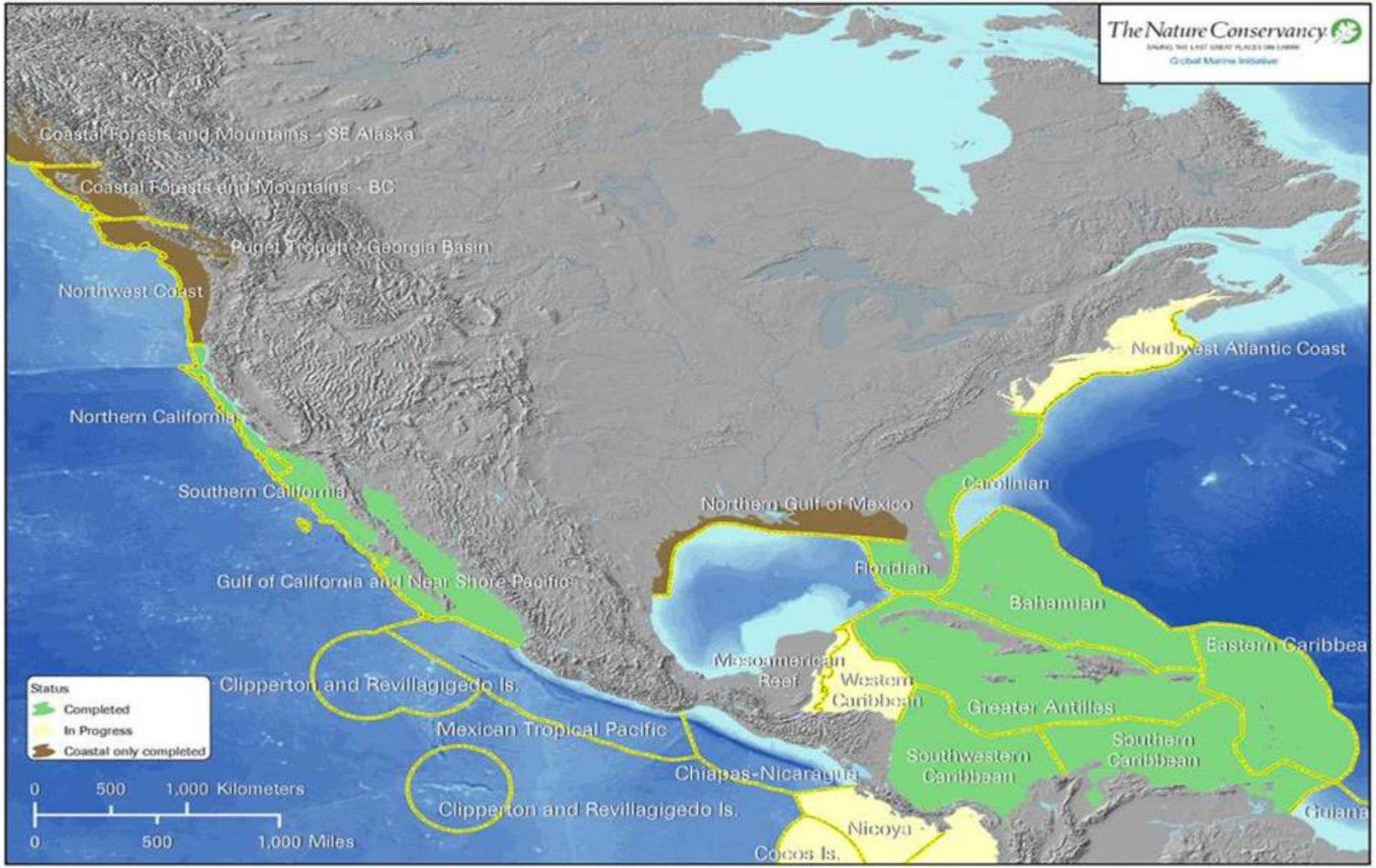
Sanctuaries and other Protected Areas

- Do they meet their goals and objectives both within and outside their boarders?
- Is science driving the management decisions?
- Are there adequate tools to manage for biodiversity?
- Are the partnerships strong enough to achieve shared management objectives & goals?

TNC- MARINE ECOREGIONAL ASSESSMENTS: Science based and data driven



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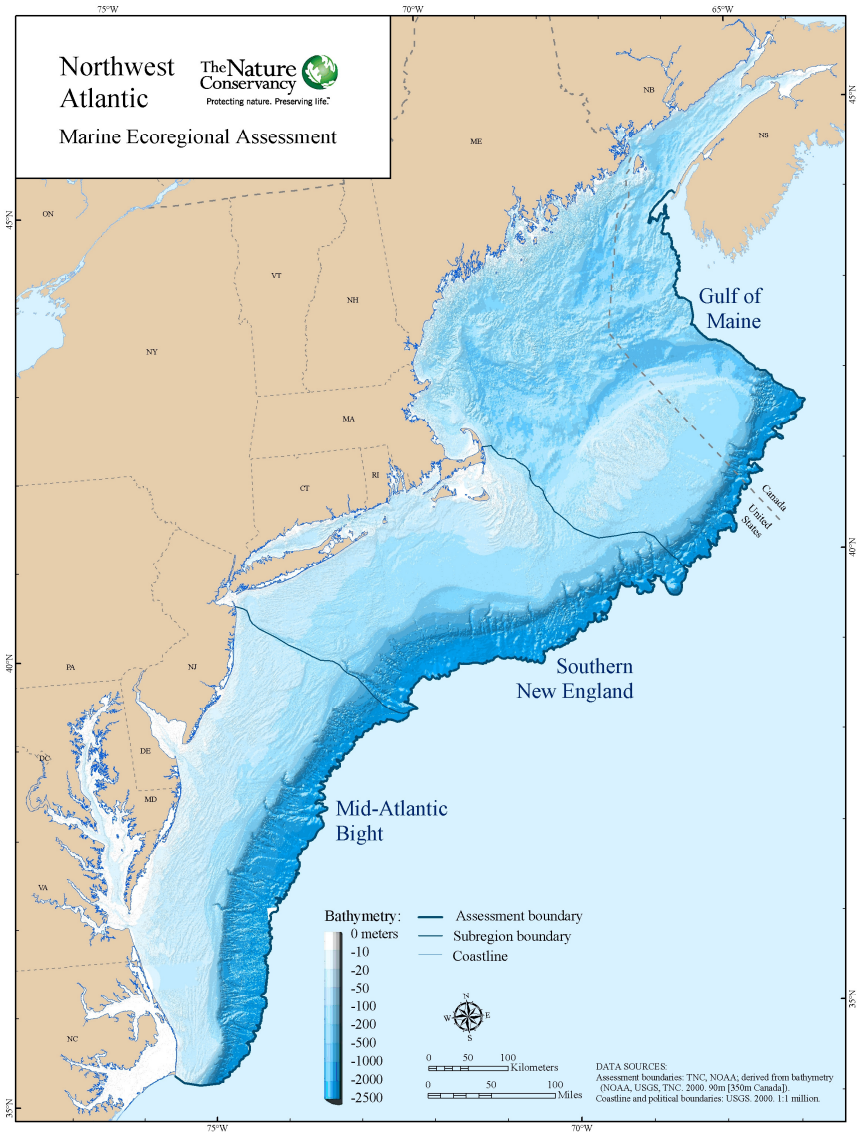
The Northwest Atlantic Region



- Bay of Fundy to Cape Hatteras, NC
- 3 subregions
  - Gulf of Maine
  - Southern New England
  - Mid Atlantic Bight
- Extends from the high tide mark in rivers and estuaries to continental shelf edge (depth of 2500 meters)
- 141,000 sq miles, Scale!

NW Atlantic Assessment

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Building on the Work of Others

- National Center for Coastal Ocean Science: An Ecological Characterization of the Stellwagen Bank National Marine Sanctuary Region
- National Resource Defense Council: Priority Ocean Areas for Protection in the Mid Atlantic
- New England Fisheries Resource Council: Essential Fish Habitat: Omnibus Amendment
- Conservation Law Foundation / World Wildlife Fund: Marine Ecosystem Conservation for New England and Maritime Canada: A Science-based Approach to Identifying Priority Areas for Conservation.
- US NAVY: US Coastal waters of the Gulf of Maine
- Cook, R. and P. Auster. 2007. A bioregional classification for the continental shelf of northeastern North America for conservation analysis and planning based on representation.
- And many others…… a continuing process

Marine Ecoregional Assessment

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Purposes and Desired Outcomes

Phase 1

- A robust, transparent, distributable data baseline, to serve as an information resource to marine decision makers and managers with a wide range of interests

Phase 2

- Assess information and identify areas, species and ecological processes of biological significance that, if conserved, will protect biological diversity of the NW Atlantic
- Begin to develop specific marine conservation strategies

Marine Ecoregional Assessment

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Data Rich: open transparent public resource

- 1200 data files collected for targets and threats
- 800 spatial data files
- 100 data stewards
- Data types
  - Benthic habitats (infauna)
  - Shoreline habitats (beaches, dunes, etc.)
  - Estuarine habitats (sea grasses, marshes, etc.)
  - Shellfish
  - Seabirds & Shorebirds
  - Marine Mammals
  - Turtles
  - Fish (demersal, forage, pelagic, diadromous)
  - Deepwater corals
  - Oceanographic data

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Marine Spatial Planning:

How do you convert data sets into meaningful and useable information?

What is Important?

- Ecologically Important
- Economically Important
- Socially Important

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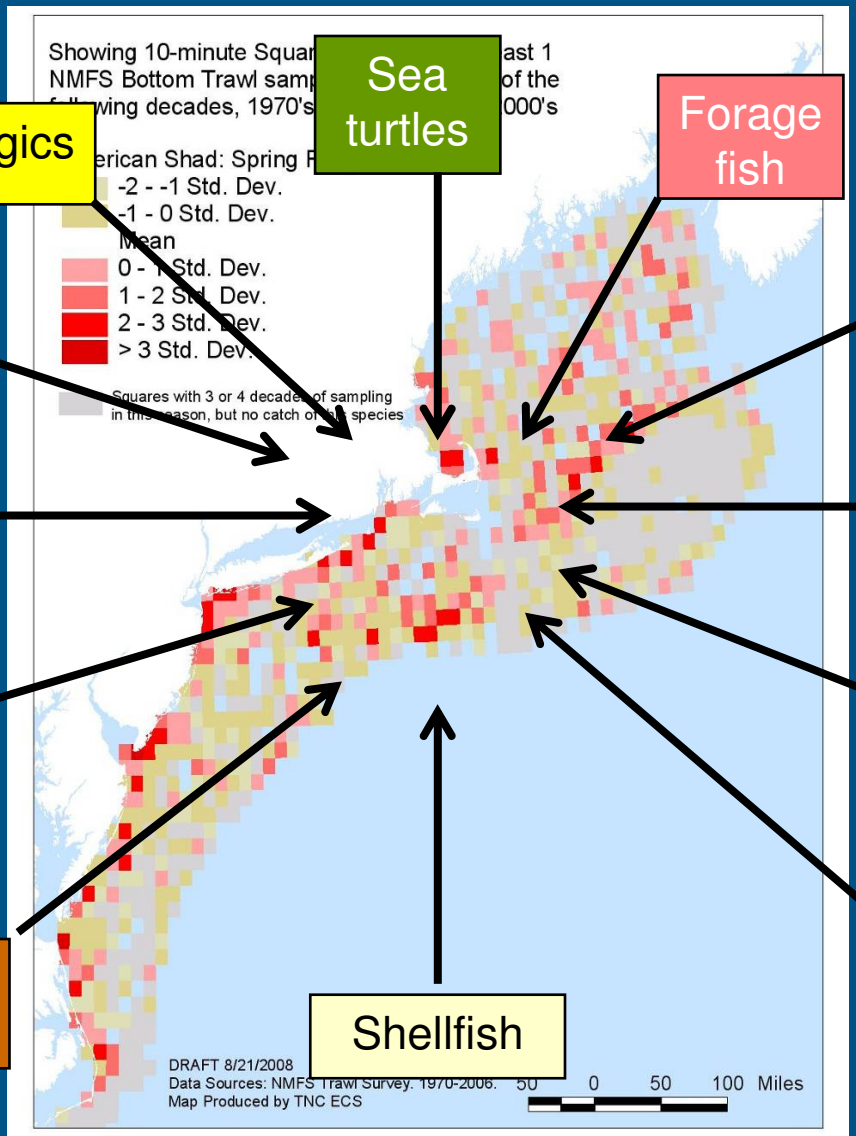
The Big Question of Conservation Science

Why are some places more important that others in maintaining biological diversity?

- Heterogeneity / Representation
- Diversity and Outstanding Characteristics
- Sources and Sinks
- Concentrated Resources
- Fronts and Linkages

Integrating Important Places for All Targets



Pelagics

Sea turtles

Forage fish

Special features

Sea birds

Coastal targets

Demersal fishes

Diad. fishes

Marine mammals

Benthic habitats

Shellfish

Corals

Regional Scale

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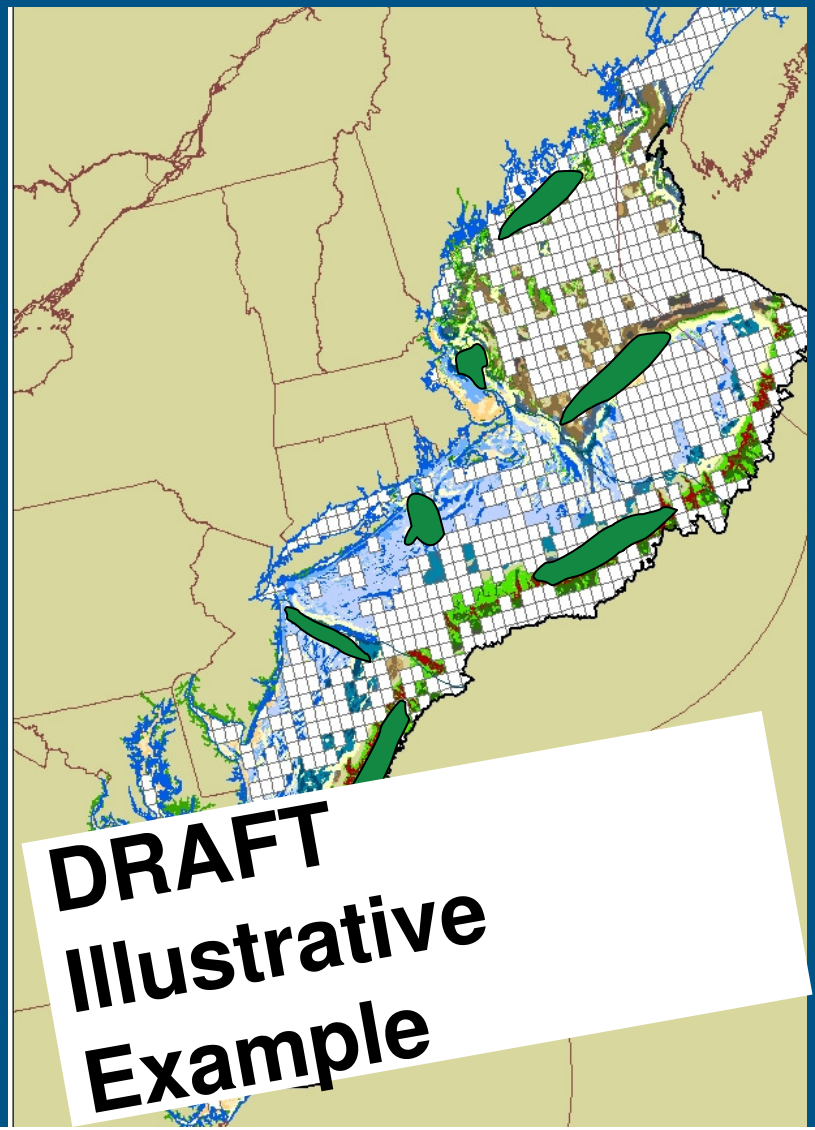
Integrated Data



- Identifying Areas of biological significance at a regional scale
- What is the role for regional decision making

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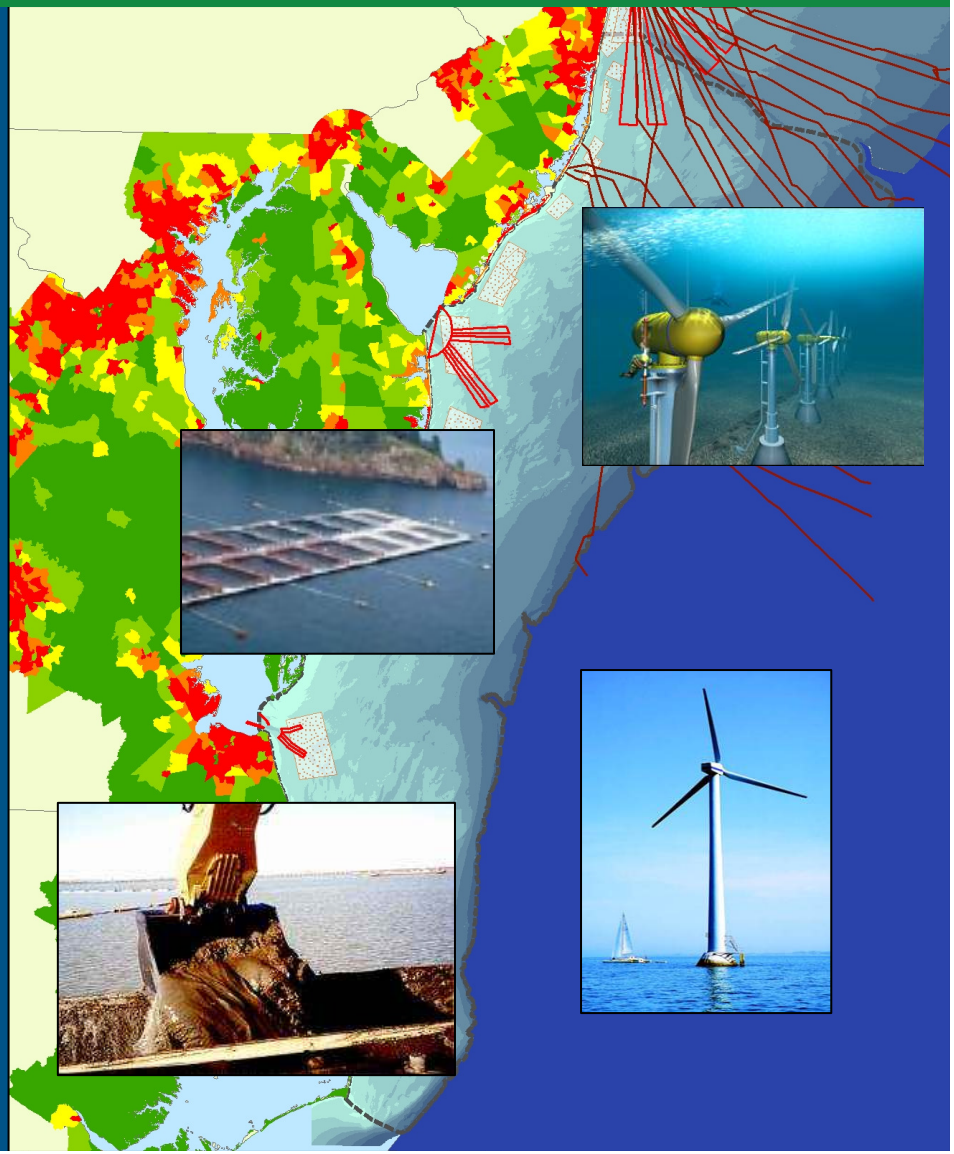
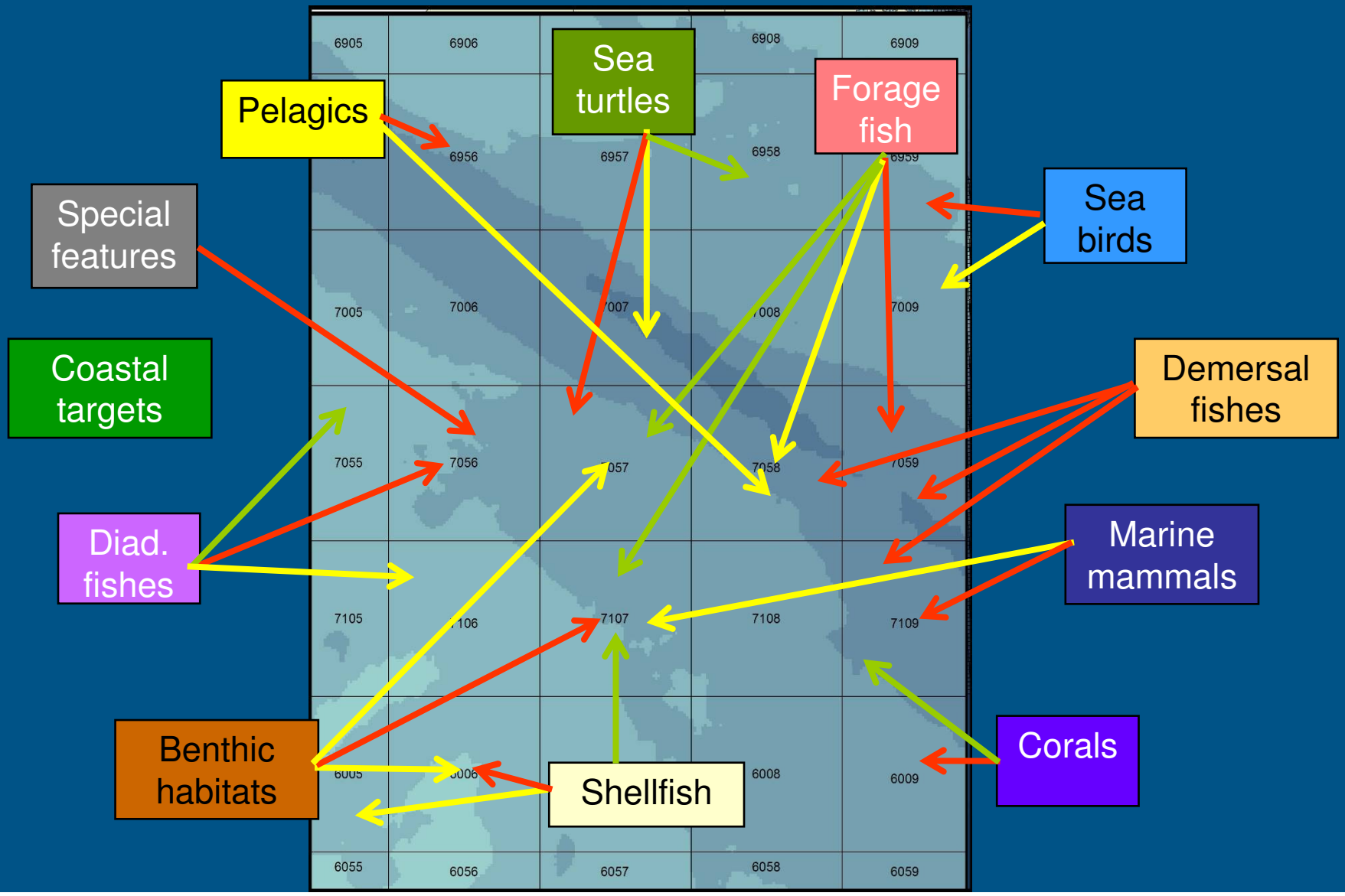
Human Uses: Tradeoffs & Cumulative effects

- Energy siting
  - Wind
  - LNG
  - Oil
- Shipping Lanes
- Telecom Cables
- Sand mining
- Fishing
- Dredging
- Population density



MULTIPURPOSE MARINE CADASTRE
EAST COAST PILOT



TNC held 5 MSP Workshops

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Principles Identified

- Science based/data driven
- Regionally based
- Ecosystem based/biological conservation
- Spatially explicit
- Cumulative Impact Assessment
- Include climate change effects
- Integrated/coordinated
- Adaptive/Not a one-time plan
- Participatory/Transparent
- Iterative process
- Feedback loops
- Precautionary

MSP Opportunity

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Strengthen management objectives

- Set objective and goals in MSP to strengthen management approaches
- MSP will help clarify and provide direction to goals
- MSP can help management plans to focus on biodiversity and areas of importance to address threats
- MSP can be an additional motivator to better manage Sanctuaries and other protected areas
- Opportunity to improve partnerships in an effort to achieve objectives in the plan (others in NOAA, FMC, industry)

MSP Opportunity

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Future Steps

Data and Science

- Uses best-available science
- Includes multiple spatially- explicit data sets
- Make data available, distributable and maintained by the federal government
- Develop regional cumulative impact assessment
- Understand the value of ecosystem services and include in MSP decision making
- Tailor MSP dialogue to hot topics/issues in each region
- Allow for early and on-going engagement and participation with by stakeholders (utilize SACs)
- Be Adaptive, iterative, look to future scenarios and uses

MSP Opportunity

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Future Steps

- A mechanisms to address conflicts or synergies across jurisdictions (FMC, energy, NMFS, DOI)
- Provide technical expertise & lessons learned to ROPs
- Standardize monitoring protocols
- Review Sanctuary effectiveness/ scale & management for biodiversity protection
- Share science, methods and data

What Does Success Look Like?

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MSP: Balancing Protections and Ocean Uses